



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/565,299

07/12/2006

Fabrizio Donazzi

09875.0359

7099

22852 7590 11/17/2009  
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
LLP  
901 NEW YORK AVENUE, NW  
WASHINGTON, DC 20001-4413

EXAMINER

TADAYYON ESLAMI, TABASSOM

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

11/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,299	<b>Applicant(s)</b> DONAZZI ET AL.	
	<b>Examiner</b> TABASSOM TADAYYON ESLAMI	<b>Art Unit</b> 1792	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/09/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |



Art Unit: 1792

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/09/09 has been entered.

### DETAILED ACTION

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. ***Claims 20-29, 33, 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard Pierre et al (U. S. Patent: 4225749, here after Pierre), in view of Sergio Belli et al (WO/ 99/ 33070, here after Belli) and further in view of Luca Castellani et al (WO02/27731, in which we considered U.S. Patent: 6824870 as legal translation, here after Castellani).***

Claim 20 is rejected. Pierre teaches a continuous process for manufacturing an electric cable comprising coating a conductor with an insulating layer in a radially outer position with respect to the conductor and form a circumferentially closed metallic sheath around the insulating layer [column 1 lines 54-66, fig. 2]. Pierre further teaches the insulating layer is extruded around the conductor [column 2 lines 20-23]. It is also

Art Unit: 1792

obvious that the conductor is feeding within the processing apparatus (fig. 2) with a predetermined speed. If the speed of feeding the conductor is very high, then the primer coating (16) may not apply uniformly or forms as a very thin layer on the conductor [fig. 2] and if the feeding speed is very slow, then the coating becomes very thick. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the conductor is fed at a predetermined speed, because it is obvious that the feeding speed is result effective variable. Pierre does not specifically teach the insulating layer is thermoplastic; neither cooling down the insulating layer to less than 70 C, nor the metallic shield being a screen. Belli teaches a method of making electrical cables comprising a conductor core (1), expanded insulating layer (5) and a metal shield (6) [page 3 lines 11-20, page 7 lines 34-35 and page 8 lines 13], where the insulator (expanded layer) is a thermoplastic polymer [page 10 line 3]. Belli also teaches the polymer is applied to the cable during extrusion [page 12 lines 17-20]. Belli further teaches the process of extruding the insulating layer to the cable core is continues [page 15 last 2 lines, page 16 lines 14-16]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the insulating layer is thermoplastic polymer, because Belli teaches it is suitable to use thermoplastic material as insulating layer for electrical cables. Since Belli teaches the process of coating is continues during coating the insulating layer on the cable and Pierre also teaches additional continues process on coated cable (adding metal screen), therefore it is obvious that the entire process from when the cable is fed to be

Art Unit: 1792

coated with insulating material till the cable is made after coating with the metallic screen is continues and without stop, because each of the references teach a continues process of each half of the process and combining both of them will lead to a continues process to save time. Billie also teaches cooling down the cable after extruding process as Billie teaches [page 16 line 22]. None of the above references teach the circumferentially closed metallic shield is a metallic screen nor extruded insulating layer is cooled down to less than 70 C (and then coat with the metal layer). Castellani teaches a method for producing cable [abstract lines 1- 2] comprising a conductive core (2) insulator shield (4) and a circumferentially closed metallic shield metallic shield (6) [fig. 1, column 8 lines 41-48]. He further teaches the metallic shield is a metallic screen [column 8 line column 8 lines 46-48]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the metallic shield is a metallic screen, because Castellani teaches it is suitable to have metallic screen to surround the cable core as a metallic shield. Castellani also teaches the cable is cool down to room temperature(less than 70C) after the insulating layer is wrapped around it [column 11 lines 9-11]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the insulating layer is cooled down to the room temperature, because Castellani teaches it is suitable to cool down extruded insulating layer.

4. Claims 21-22 are rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Castellani teaches cooling down the insulating layer

Art Unit: 1792

to room temperature (27 C) which is close to the claimed range 0100, 0101, MPEP 2144.05.1]. Generally, differences in temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such temperature is critical [MPEP 2144.0511.A].

Claim 23 is rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Pierre teaches longitudinally folding a metal sheet around the insulating layer [column 2 lines 23-26].

Claim 24 and 25 are rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Pierre teaches folding the metal sheet round the cable by means of a shaping device (fig. 1) [column 2 lines 25-29 and 55-58] and from it is obvious that the edges of the metal sheet are overlapping and bonding to surround and protect the entire structure. The edges are bonded, because Pierre teaches after forming the metal sheet around the cable, a plastic sealing sheath forms around the metallic sheath [column 2 lines 58-65], therefore it bonds the edges of the metallic foil together.

Claim 26 is rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Castellani teaches the conductor is in form of rod [2 in fig. 1 or fig. 2]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the conductor is supplied in a form of rod, because Castellani teaches it is appropriate to supply the conductor in form of rod.

Claim 27 is rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Pierre teaches applying a primer layer (sealing compound) around the metallic sheet [column 2 lines 47-55].

Claim 28 is rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Pierre teaches applying the primer layer ~s carried out by extrusion [48-52].

Claims 29 and 33 are rejected. Pierre, Belli and 4 Castellani teach the limitation of claim 20 as discussed above and Pierre teaches applying impact protecting element (over sheath) around circumferentially closed metallic screen [column 2 67lines 58-60].

Claim 36 is rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Belli teaches the thermoplastic material is polypropylene [page 10 lines 3]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the insulating layer is thermoplastic polypropylene, because Belli teaches it is suitable to use thermoplastic polypropylene as insulating layer for electrical cables.

Claim 37 is rejected. Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above and Pierre teaches the polymer is polyethylene [column 1 lines 51-52].

**5. Claims 30, 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard Pierre et al (U. S. Patent: 4225749, here after Pierre), Sergio Belli et al (WO/ 99/ 33070, here after Belli) and Luca Castellani et al (WO02/27731, in which we considered U.S. Patent: 6824870 as legal translation, here after**



***Castellani), as applied to claim 20 above and further in view of Sergio Belli et al (U. S. patent: 6501027, here after 027).***

Claims 30, 33 and 34 are rejected. Pierre, Belli and Castellani teach the limitation of claim 29 as discussed above. Bellie teaches the polymer layer (5) is expanded layer. They do not teach applying an impact protecting element comprises the step applying a non-expanded polymeric layer around the metallic screen. 027 teaches a coating for cable which is capable to protect the cable against impacts [abstract]. 027 further teaches applying a coating of non-expanded layer polymeric layer around the metallic screen [column 15 lines 28-37]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where an impact protecting layer applied circumferentially around the metallic layer comprises non expanded polymer layers where the non expanded polymer layer is applying an over sheath around the metallic screen, because 027 teaches it is suitable to have the impact protecting layer around the cable.

6. ***Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard Pierre et al (U. S. Patent: 4225749, here after Pierre), Sergio Belli et al (WO/ 99/33070, here after Belli) and Luca Castellani et al (WO02/27731, in which we considered U.S. Patent: 6824870 as legal translation, here after Castellani), as applied to claim 29 above and further in view of Sergio Belli et al (WO 03/088274A1 here after 274).***

Pierre, Belli and Castellani teach the limitation of claim 29 as discussed above. 274 teaches a method of making cables for power transmission at low voltage [

Art Unit: 1792

abstract] and he further teaches the step of applying expanded polymer over un-expanded polymer as the outer most protective layer around an electrical cable [ abstract] to increase the peeling-off property of the cable [ page 6 lines 13-16].

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the expanded polymeric layer is applied around the non-extended polymeric layer, because 274 teaches it increase the peeling-off property of the cable.

**7. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard Pierre et al (U. S. Patent: 4225749, here after Pierre), Sergio Belli et al (WO/ 99/ 33070, here after Belli) and further in view of Luca Castellani et al (WO02/27731, in which we considered U.S. Patent: 6824870 as legal translation, here after Castellani), as applied to claim 20 above, further in view of Agusti Vails Prats (U. S. Patent: 6416813, here after 813).**

Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above. They do not teach the step of cooling down the extruded insulating layer is carried out by longitudinally feeding the conductor with the thermoplastic layer through an elongated cooling device. 813 teaches a method of making an electric cable comprising a conductor core and an insulating layer [ abstract lines 1-2] and 813 further teaches cooling the extruded insulating layer by feeding the conductor with the insulating layer longitudinally to the cooling device [10 in fig. 1, column 2 lines 43-45].

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method of making an electric cable as Pierre, Belli, and

Art Unit: 1792

Castellani teaches where the cooling step is done as 813 teaches, because 813 teaches an appropriate method for cooling down the cable structure.

8. ***Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard Pierre et al (U. S. Patent: 4225749, here after Pierre), Sergio Belli et al (WO/ 99/33070, here after Belli) and Luca Castellani et al (WO02/27731, in which we considered U.S. Patent: 6824870 as legal translation, here after Castellani), as applied to claim 20 above and further in view of S. P. A Pirelli et al (WO/2002/047092, here after 092).***

Pierre, Belli and Castellani teach the limitation of claim 20 as discussed above. They do not teach the thermoplastic polymer material of the insulating layer includes a predetermined amount of a dielectric liquid. 092 teaches a method of producing cables comprising extruding a thermoplastic material of at least one thermoplastic polymer and at least one dielectric liquid [abstract]. 092 further teaches adding a predetermined amount of liquid dielectric [paragraph 64] to prevents the occurrence of partial discharges and thus per formation of the electric insulation [paragraph 7]. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have a method that Pierre teaches where the thermoplastic polymer material of the insulating layer includes a predetermined amount of a dielectric liquid, because 092 teaches adding the liquid dielectric prevents the occurrence of partial discharges and thus per formation of the electric insulation.

***Response to Arguments***

9. Applicant's arguments filed 10/09/09 have been fully considered but they are not persuasive. The applicant argues none of the references teaches the continuous process for manufacturing an electric cable. The examiner disagrees; in fact Pierre teaches a continuous process of manufacturing cable, although the entire process from the beginning to the end is not continuous, fig. 2 clearly teaches the process is continuous at least in part which is the processing of the cable after coated with insulating layer and during the coating with metal screen. However Billie also teaches a continuous process for coating insulating material on a cable core via extruding (page 15, last 2 lines, page 16 lines 14-16], and it is obvious to combine two continuous process to have one continuous process.

The applicant argues the references do not teach forming circumferentially closed metallic screen around the extruded layer is continuous. However Pierre teaches a continuous process for forming a metallic shield and Castellani teaches the metallic shield is a metallic screen. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The applicant argues Castellani does not teach the screen is added to the semi conductive layer after cooling. The examiner disagrees, It is inherent that the hot coating has to cool down before applying the metal coating and Billie also teaches

Art Unit: 1792

cooling down process after extruding process as Billie teaches [page 16 line 22]. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TABASSOM TADAYYON ESLAMI whose telephone number is (571)270-1885. The examiner can normally be reached on 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tabassom T. Tadayyon-Eslami

Application/Control Number: 10/565,299  
Art Unit: 1792

Page 12

Examiner  
Art Unit 1792

/Tabassom T. Tadayyon-Eslami/  
Examiner, Art Unit 1792

/Michael Cleveland/

Supervisory Patent Examiner, Art Unit 1792